## **EUROPEAN PATENT OFFICE**



## Patent Abstracts of Japan

PUBLICATION NUMBER PUBLICATION DATE

10045794 17-02-98

CH2 = CCOCH2CH2OPOCH2CH2N'(CH3)3

O.

ŏ

APPLICATION DATE APPLICATION NUMBER

31-07-96 : 08202367

Ì

APPLICANT: RESIDEVICORP OF JAPAN;

INVENTOR: ISHIHARA KAZUHIKO;

INT.CL.

: C07K 1/00 C07K 14/00 C07K 16/00 C08L 89/00 C08L101/00 C12N 9/96 C12Q 1/25 // A61K 38/00 A61K 38/16

A61K 38/43

O -OPOCHICHIN'(CHA)

Ò٦

TITLE

: STABILIZATION OF PROTEIN AND

COMPOSITION

Ħ

ABSTRACT: PROBLEM TO BE SOLVED: To stabilize various proteins used for clinical medicines, clinical diagnosis, medical devices, etc., without regard to states by the coexistence of a specific polymer having phosphorylcholine groups with a protein in the same system.

> SOLUTION: (A) A polymer, having phosphorylcholine group represented by formula II and obtained by polymerizing a phosphorylcholine group-containing monomer represented by formula I (X is H or methyl) [e.g. 2-(meth) acryloyloxyethyl-2'-(trimethylammonio)ethyl phosphate] and having the phosphorylchloine group represented by formula II in an amount of 1.0×10<sup>-4</sup> to 20wt.% is mixed with (B) a protein such as a blood plasma pharmaceutical preparation protein (e.g. an albumin pharmaceutical preparation) in an amount of 1.0×10<sup>-14</sup> to 20wt,% and (C) a buffer solution (e.g. a disodium hydrogenphosphate/sodium dihydrogenphosphate buffer solution) in an amount of 0-99.9wt.% to thereby stabilize various proteins used for clinical medicines, clinical diagnosis or medical devices, etc., without regard to a preservation state.

COPYRIGHT: (C)1998,JPO